

**BEFORE THE ILLINOIS COMMERCE COMMISSION**

**Docket No. 01-0614**

*Ameritech* 01-0614  
6.0

**Direct Testimony of Craig S. Mindell**  
**On Behalf of Ameritech Illinois**

*12/4/9*  
*cel*

**Ameritech Illinois Exhibit 6.0**

**October 25, 2001**

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**DIRECT TESTIMONY OF CRAIG S. MINDELL**  
**ON BEHALF OF AMERITECH ILLINOIS**  
**DOCKET NO. 01-0614**

**I. INTRODUCTION AND PURPOSE OF TESTIMONY**

**Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?**

A. I am employed by SBC Management Services, Inc. as Area Manager – Interconnection.

**Q. WHAT ARE YOUR JOB RESPONSIBILITIES?**

A. I am responsible for network interconnection issues and contract negotiation support in the network regulatory organization. My responsibilities include the presentation explanation and justification of the SBC ILECs' network interconnection positions before regulatory and legislative authorities. I also participate in interconnection contract negotiations.

**Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?**

A. I graduated from Washington University in St. Louis with a Bachelor of Arts, major in Urban Studies, concentration in statistics and econometrics. As an SBC employee, I've supervised and received training in the functions of switch translations, access services sales and billing support, network services forecasting, project management functions and facilities construction pricing. I have developed and held training seminars for employees and customers of Southwestern Bell Telephone Company in access and cellular service functions and pricing. I've worked with SBC companies 25 years, and in management for 22 of those years.

24 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

25 A. The purpose of my testimony is to explain the changes which Ameritech Illinois is  
26 proposing be made to the ICC No. 20, Part 23, Section 2. – Ameritech End Office  
27 Integration Service (AEOIS) ("Section 2"). The changes Ameritech Illinois  
28 proposes are reflected in the redlined version of Section 2 distributed to the parties  
29 on October 5, 2001, and included in Exhibits 1.1 and 1.2 sponsored by Mr.  
30 Wardin.

31 **II. INTERCONNECTION ISSUES**

32  
33 **Q. WHAT SERVICES ARE COVERED BY SECTION 2?**

34 A. Section 2 covers network interconnection services, which embraces the target  
35 architecture of connecting the respective networks of Ameritech Illinois and  
36 Competitive local exchange carriers (CLECs) for the transmission of traffic  
37 between those networks. The elements include physical equipment (trunks  
38 connecting each carrier's switch, and the cable, fiber or microwave systems the  
39 trunks use) as well as ground rules for call routing. The network connections  
40 covered in Section 2 are connections between ILEC and CLEC switch, and do not  
41 cover the UNEs (Unbundled Network Elements) that ILECs use to connect to  
42 former ILEC customers using ILEC plant (ground cable to customer premises).

43 **Q. WHY HAS AMERITECH ILLINOIS PROPOSED AMENDMENTS TO**  
44 **PART 23, SECTION 2?**

45 A. The amendments are being proposed to bring the Tariff into compliance with the  
46 changes in Section 13-801(b) of the Illinois Public Utilities Act (the

47 "Act"). In particular, the amendments primarily concern provisions for Points of  
48 Interconnection ("POIs").

49 **Q. HOW DO TELECOMMUNICATIONS NETWORKS (CLEC AND ILEC)**  
50 **INTERCONNECT?**

51 A. Interconnection between networks occurs on several levels, physical and  
52 "logical." When a telephone subscriber picks up his phone, he "pulls" dial tone  
53 from a switch. Switches are the computers that process calls, interpreting dialed  
54 digits and choosing connections.

55 As calls take place between subscribers of different switches, trunks (a  
56 conversation path) connect those switches, either directly or through intervening  
57 "tandem" switches. As an example an Aurora subscriber of Ameritech Illinois's  
58 network might dial a Hinsdale subscriber of Level 3. A circuit to complete the  
59 call might be connected using a trunk between Ameritech Illinois's Aurora end  
60 office (which is providing the dialtone to the end-user making the call) and its La  
61 Grange tandem, and another between that Ameritech Illinois La Grange tandem  
62 and Level 3's Chicago switch.

63 Trunks include the circuitry in each switch, and the programming that allows  
64 voices to be heard on each end. Facilities are the physical transport media upon  
65 which the trunks ride. Facilities may be copper wires, microwave radio, and most  
66 commonly today, fiber optics. A trunk may ride entirely on a single media or  
67 upon several, and between carriers a single facility might be jointly provided  
68 (Level 3 and Ameritech Illinois each supplying electronics at its own end, and

69 each supplying half the fiber), or provided totally by one carrier, for the use of  
70 both.

71 One way to picture the differences between trunks and facilities is to picture a  
72 highway. An individual lane of traffic, with signal lights at each end, is like a  
73 trunk. The concrete, asphalt, and steel bridges are the facilities the lanes of traffic  
74 rest on.

75 **Q. WHAT IS A "POINT OF INTERCONNECTION"?**

76 A. While "Point of Interconnection" (POI) is a phrase that can be used in several  
77 different ways, the clearest definition is the point where the facilities supplied by  
78 two different carriers join together. For the Level 3/Ameritech Illinois example  
79 above, if Level 3 and Ameritech Illinois connect a fiber system to each other at the  
80 La Grange tandem , the POI is at the La Grange tandem building. Trunks  
81 connecting 100 different switches may traverse that single POI, or additional POIs  
82 may be constructed at other sites.

83 **Q. DOES POI PLACEMENT HAVE AN EFFECT ON COST**  
84 **APPORTIONMENT?**

85 A. Yes. The POI marks the spot where installation and maintenance by one carrier  
86 ends, and installation and maintenance by the other carrier begins. To use the  
87 highway analogy again, it is similar to those road signs that indicate where a  
88 county's maintenance obligation begins, and a city's ends.

89

Where that POI is located, particularly relative to each carrier's switch, determines how much transport each carrier must provide, maintain, etc. The closer the POI is to a carrier's own switch, the lower the cost of interconnection for that carrier.

**Q. WHAT DOES AMERITECH ILLINOIS'S NETWORK LOOK LIKE?**

A. Ameritech Illinois serves millions of subscribers from more than 200 switches, in most of the Illinois LATAs (Local Access and Transport Areas). The largest number of customers are in the Chicago LATA, with 150 switches. The Chicago LATA reaches north to the Wisconsin line, South to Kankakee, and west as far as Woodstock and LaSalle, Illinois. The LATA is 100 miles long, and 80 to 100 miles wide (varying with the curve of the lake).

The local and local-toll network architecture of large multi-switch LATAs is based upon each switch having direct trunks to all other switches with which it trades a significant amount of traffic. For connections to the remaining switches in a LATA, and to handle traffic which overflows the direct connections (i.e., when the direct connections are at capacity), an end office switch is assigned to a "tandem" switch, and is said to "subtend" that tandem switch. In addition to connecting to all of the end office switches that subtend them, tandem switches also connect to each other, to interexchange carriers, and to any other switch with which significant traffic is traded (including other end office switches that subtend other tandem switches).

111 For Ameritech Illinois, each tandem location serves a sector of a LATA for local,  
112 toll and Interexchange carrier access traffic using one or more tandem switches.  
113 The tandem building locations are shown on the following list.

TANDEMS	LATA
CHICAGO LOOP	CHICAGO
SKOKIE	CHICAGO
CHICAGO SOUTH SIDE	CHICAGO
LA GRANGE	CHICAGO
NORTHBROOK	CHICAGO
HARVEY (As of Nov, 2001)	CHICAGO
ROCKFORD	ROCKFORD
PEORIA	PEORIA
CHAMPAURBN	CHAMPAIGN
DECATUR	SPRINGFIELD
SPRINGFLD	SPRINGFIELD
JACKSONVILLE (IND CO)	JACKSONVILLE
CENTRALIA	ST. LOUIS
COLLINSVL	ST. LOUIS

114  
115 **Q. WHAT INTERCONNECTION ARCHITECTURE DOES AMERITECH**  
116 **ILLINOIS SEEK TO ESTABLISH WITH CLECS?**  
117 **A.** Ameritech Illinois wants an equitable sharing of transport and seeks CLECs to  
118 supply facilities to each Ameritech Illinois tandem where local traffic is traded. In  
119 that way, Ameritech Illinois does not have to switch local traffic from or to a  
120 CLEC's network between Ameritech Illinois's tandem. Ameritech Illinois's  
121 facility responsibility mirrors the CLEC's, in that Ameritech Illinois provides  
122 facilities from its own end offices to the same tandem site. Should a CLEC have  
123 local traffic with Aurora, Illinois, as an example, Ameritech Illinois will bring  
124 facilities from Aurora to the La Grange tandem (about 23 miles), and ask the



125 CLEC to bring facilities to the same point. (If the CLEC is located near the loop,  
126 his portion of the span to Aurora would be about 15 miles).

127 On the facilities Ameritech Illinois brings in from Aurora, there may be dedicated  
128 trunks from the Aurora switches for the carrier to interconnect to its own switch.  
129 There may also be common trunks connecting the Aurora end office and the La  
130 Grange tandem, which will be switched for the duration of a call to tandem trunks  
131 connecting La Grange and the CLEC switch. Whether one set of trunks or two  
132 connect the CLEC/ILEC end offices, Ameritech Illinois offers to supply facilities  
133 between La Grange (the tandem) and Aurora (its own end office) and desires that  
134 the CLEC does the same.

135 **Q. ARE INTERCONNECTION COSTS BETWEEN CLECS AND**  
136 **AMERITECH ILLINOIS A SIGNIFICANT EXPENSE?**

137 **A.** Yes. In a recent study Ameritech Illinois had about 1.8 million interoffice trunks  
138 connecting its switches to each other or to other carriers and, of those, almost  
139 500,000 (about 28%) were trunks connecting to CLECs. In general, the trunk  
140 facilities run 17.3 million circuit miles (multiplying the number of trunks  
141 Ameritech Illinois has by the average distance between switches) of which  
142 Ameritech Illinois to CLEC is 27%. It is important that this investment be  
143 equitably split between Ameritech Illinois and CLECs, both of whom derive  
144 benefit from the connection and underlying investment.

145 **Q. HAS THE COMPANY PROPOSED ANY CHANGES IN PART 23,**  
146 **SECTION 2 WHICH AFFECT THE CLEC OPTIONS FOR AN**  
147 **INTERCONNECTION ARCHITECTURE?**

148 A. Yes. The Company has amended Part 23, Section 2 to show an additional option  
149 and its companion pricing, available to those CLECs that wish to use a Single  
150 Point of Interconnection for a LATA. This amendment is responsive to Section  
151 13-801(b)(1)(B), which requires Ameritech Illinois to offer the Single POI option.

152 **Q. HOW IS THAT OPTION SHOWN IN THE TARIFF?**

153 A. Section 4.2—Responsibilities of the Telecommunications Carrier, Paragraph I on  
154 2<sup>nd</sup> Revised Sheet No. 5.1 of Section 2 provides that that “Carrier may choose to  
155 exchange traffic at a Single POI for the entire LATA....” On 2<sup>nd</sup> Revised Sheet No.  
156 5.2, Paragraph I further states that that “Carrier may also originate or terminate  
157 traffic on its side of the POI for delivery to or from an Ameritech Illinois end user  
158 that is physically located in a different local exchange from where the POI is  
159 located. Carrier and Company may mutually agree to jointly provision Foreign  
160 Exchange service to that end user, in which case this general tariff shall not apply.  
161 But in those instances where Carrier and Company are not jointly providing  
162 Foreign Exchange service, then Carrier agrees that additional call delivery  
163 burdens are imposed on the Company for the transport and/or switching that is  
164 required to deliver the call to or from locations outside of the local exchange. To  
165 compensate the Company for that portion of the call delivery on Company’s side  
166 of the POI that is outside of the local exchange, Carrier shall pay the Company for  
167 interexchange switching and transport provided by the Company, if any, at the  
168 appropriate tariffed Intrastate Switched Exchange Access rate, less the mileage for  
169 a local call in Illinois.”

170 **Q. TO WHAT TRAFFIC IS THE TARIFF REFERRING TO IN THE SINGLE**  
171 **POI OPTION?**

172 A. There are two types of calls being indicated—local and foreign exchange (FX).  
173 When either is passed to or from a CLEC that has sought an expensively large  
174 large amount of Ameritech Illinois transport, Ameritech Illinois seeks  
175 compensation for the extra costs incurred by Ameritech Illinois for that transport.

176 **Q. HOW DOES THE FCC'S FIRST REPORT AND ORDER DISCUSS**  
177 **INTERCONNECTION COSTS WITH REFERENCE TO WHAT IS A**  
178 **NORMAL COST?**

179 A. The FCC's First Report and Order, in Paragraph 199, allows an ILEC to be  
180 compensated for expensive interconnections, saying, "Of course, a requesting  
181 carrier that wishes a 'technically feasible' but expensive interconnection would,  
182 pursuant to section 252(d)(1), be required to bear the cost of that interconnection,  
183 including a reasonable profit."

184 **Q. HOW MIGHT A LOCAL CALL REQUIRE EXPENSIVE TRANSPORT?**

185 A. Consider a local call where both the calling party and called party are in Aurora,  
186 the calling party is an Ameritech Illinois end user served by a switch in Aurora,  
187 the called party is a CLEC end user, and the CLEC single POI is located in  
188 downtown Chicago, 40 miles away. Because of the location of the CLEC's POI,  
189 a call that may only have to be transported a net 3 miles within Aurora (the  
190 physical distance between Ameritech Illinois switches of the calling and called  
191 parties), now must be transported "Downtown" to be handed off to the CLEC.  
192 For receiving a "local" call from an Aurora CLEC customer, in the reverse  
193 direction, Ameritech Illinois would be handed off the call in Downtown Chicago,

194 and then be required to haul the traffic 40 miles back to Aurora. Traditionally  
195 Ameritech Illinois has been compensated at either toll or access rates for  
196 transporting a call 40 miles; in the tariff provision being discussed above,  
197 Ameritech Illinois bills the CLEC for access.

198 **Q. DO THE RECIPROCAL COMPENSATION PROVISIONS OF LOCAL**  
199 **INTERCONNECTION NOT COMPENSATE AMERITECH ILLINOIS**  
200 **FOR THE LONG TRANSPORT?**

201 **A.** No, reciprocal compensation doesn't cover the costs, for three reasons:

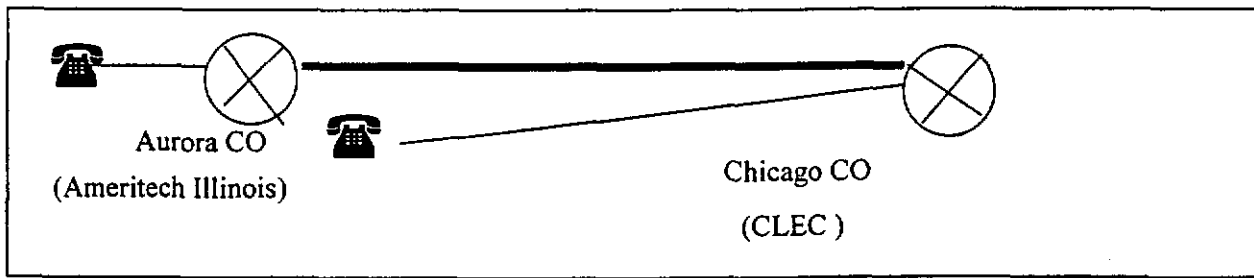
202 In the first place, Ameritech Illinois is compensated only for calls coming into its  
203 network and must pay reciprocal compensation for calls it sends to the CLEC.

204 In the second place Ameritech Illinois bills reciprocal compensation for transport  
205 only on tandem routed calls. When calls are placed on trunks that directly  
206 connect two end office switches without an intervening tandem, Ameritech  
207 Illinois does not bill for the distance it has supplied for the underlying trunk  
208 facilities.

209 Finally, the amount of transport that Ameritech Illinois does bill (when it bills....)  
210 is based on the distance between a tandem and its subtending

211 end office. This is an appropriate amount when the CLEC meets Ameritech  
212 Illinois at the tandem sites, but falls short under single POI designs.

213 The following picture will show the long transport that can be involved in a local  
214 call run through a single POI:

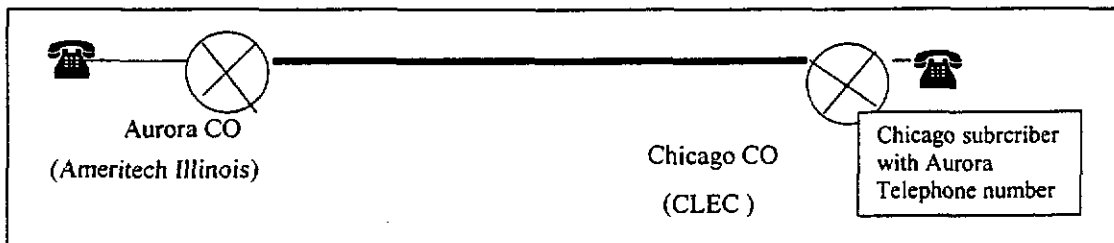


**Q. WHAT IS AN FX CALL?**

**A.** FX or "Foreign Exchange" is service where two end users are located in different exchanges and local calling scopes, but can still call each other on a local basis.

**Q. HOW MIGHT AN FX CALL REQUIRE EXPENSIVE TRANSPORT?**

**A.** In an example of FX calling, an Aurora telephone number might be assigned by a CLEC to the CLEC's customer who is physically located near the CLEC switch in the Loop. The purpose of the FX number is to enable an Aurora Ameritech Illinois customer to dial the CLEC customer on a local basis. If the POI is 40 miles away, however, the costs are the same to Ameritech Illinois as any toll call to Chicago. It is a long distance call, whose costs are born by Ameritech Illinois when the POI is near the CLEC.



239 **Q. WHAT CONCLUSIONS DO YOU DRAW CONCERNING HOW WELL**  
240 **THE TARIFF REFLECTS NETWORK REALITIES?**

241 A. While Ameritech Illinois witness Eric Panfil will be addressing the price of Single  
242 POI that is proposed in the Tariff, the costs involved for providing a single POI  
243 are costs that appropriately should be borne by the CLEC who has decided to use  
244 this network architecture and its service arrangements, and thus is the cost causer.  
245 It is an appropriate charge for both local calls involving long distances, and FX  
246 calls which are local only in their appearance to an Ameritech Illinois customer  
247 dialing the FX number.

248  
249 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

250  
251 A. Yes, it does.